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ABSTRACT

A series of social interaction situations representing the four emotions of happy, afraid, sad, and angry were administered to 288 American children and 288 Chinese children. Twenty-four girls and 24 boys, half from middle class families and half from disadvantaged families, were tested at six-month intervals between 3 and 6 years of age. Children from both cultural groups exhibited similar overall trends in their ability to recognize other people's emotional responses. By 3 years of age, the majority of American and Chinese children could differentiate between happy and unhappy reactions in other people. Perception of afraid, sad and angry feelings developed somewhat later, and appeared to be influenced by social learning. This cross-cultural study confirms the results of a previous investigation that very young children are capable of empathic responses. The awareness of other people's feelings by young children from very different cultural backgrounds suggests that empathy may be a basic human characteristic related to social adaptation. (Author)

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THE DEVELOPMENT OF EMPATHY IN CHINESE AND AMERICAN CHILDREN BETWEEN THREE AND SIX YEARS OF AGE: A CROSS-CULTURAL STUDY[1]

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Empathy in its most advanced stage is the ability to perceive the world from the perspective of the other. Although awareness of another person's viewpoint is essential for effective interpersonal communication, very little is known about the early development of empathic ability. Until recently, most of the available evidence suggested that young children are primarily egocentric and that sociocentric thinking seldom appears before early adolescence (Burns & Cavey, 1957; Chandler & Greenspan, 1972; Flapan, 1968; Flavell, Botkin & Fry, 1968; Freud, 1965; Gollin, 1958; Piaget, 1926, 1928, 1967; and Werner, 1948).

In two previous papers (Borke, 1971 & 1972) I questioned the conclusion that young children are egocentric and unable to take another person's perspective. Data from an earlier study (Borke, 1971) indicated that by 3 years of age children are capable of differentiating between happy and unhappy responses in other people and can recognize social situations associated with these responses. An alternate hypothesis was proposed that the development of empathy is a continuous process which proceeds through a series of hierarchical stages closely related to cognitive development. Empathy is manifested in very young children as a conscious awareness that other people have feelings which are different from their own and culminates during adolescence in what Piaget describes as truly relativistic thinking; thinking that involves the ability to put oneself in another person's place and see the world through that person's eyes.

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Since the original research was based on a small sample of middle class American children (Borke, 1971), the effects of cultural and social class variables were not investigated. A cross-cultural study which controlled for social class differences was conducted to provide information about 1) the relationship between the development of empathic ability and specific social class and cultural influences, and 2) the universality of development of empathic awareness. The study compared very young Chinese and American children. Both the Chinese and American cultures emphasize the central importance of the family but in each of these societies socialization occurs within the context of very different cultural traditions. The Chinese family encourages mutual dependence and social conformity whereas the American family stresses self-reliance and individual freedom (Murphy & Murphy, 1968).

Procedure

Several steps were taken to insure that the instrument employed to measure empathy would be as free as possible of cultural bias. First, American kindergarten children in the United States and Chinese kindergarten children in Taiwan were asked to describe the kinds of situations that might make them feel happy, afraid, sad, or angry. The children's spontaneous comments were tape recorded and categorized. Responses common to both groups were used as the basis for constructing two sets of stories: 1) stories describing general situations that might make a child feel happy, afraid, sad or angry, and 2) stories describing situations in which the child being tested does something that might cause another child to feel happy, afraid, sad, or angry.

These two sets of stories were then administered to 87 Chinese second graders and 96 American second graders. The children were asked to indicate how another individual might feel in each situation by selecting one of four stylized faces depicting the emotions of happy, afraid, sad, or angry. Ekman, Sorenson & Friesen's study (1969) indicating pan-cultural elements in the identification of emotions from facial expressions provided the research basis for presenting the stylized faces. A Chi Square analysis was used to determine which stories had responses that differed from a random classification pattern. The four stories which showed the highest agreement among children's responses in both cultural groups were selected for each of the affective categories (i.e., happy, afraid, sad, and angry). Also selected were four situations which showed high agreement among children's responses in one cultural group but not in the other, and three situations which showed high variability of responses for the children in both cultural groups.

The final set of 23 stories was administered to 288 Chinese and 288 American children. Half of the children in each group were from middle class families and half were from disadvantaged families. The children were also equally divided between the two sexes. Twelve girls and 12 boys from similar socio-economic and cultural backgrounds were tested for each six-month interval between 3 and 6 years of age (i.e., 3-3.5, 3.5-4, 4-4.5, 4.5-5, 5-5.5, 5.5-6).

The 3 to 5 year old American and Chinese middle class children who participated in this study all attended private nursery schools. The children in the 5 to 6 year old range were obtained from public school kindergartens in predominantly middle class neighborhoods. The

American 3 to 5 year old children in the disadvantaged group attended either Head Start or Child Care programs supported by federal funds. The 5 to 6 year old American youngsters went to kindergartens in the same elementary schools that provided the educational programs for the younger children. The Chinese preschool children described as lower class attended special workers' preschools supported by the government. The 5 to 6 year old Chinese youngsters were selected from schools located in working class neighborhoods.

The task was administered individually to the children in their schools. The American children were tested by graduate students under the supervision of the principal investigator. The Chinese children were tested by college psychology majors in their senior year. Sarah Su, Professor of Child Development, National Taiwan Normal University, translated the test materials, established liasons with the cooperating schools and supervised the students who did the testing.

The testing procedure used by all of the examiners consisted of first asking the children to identify drawings of faces representing the four basic emotions of happy, afraid, sad, and angry. After helping the children identify each of the faces, the examiners presented the first set of stories. Each story in this set was accompanied by a picture of a child with a blank face engaged in the described activity. The children were asked to complete the pictures by selecting the face that best showed how the child in the story felt. The faces were presented in random order and with each presentation the examiners again identified the emotions for the youngsters. The same procedure was followed for the second set of stories involving peer interactions except that a single picture of a youngster standing was used for all of the stories.

Results

Chinese and American children between 3 and 6 years of age were compared for number of correct perceptions of happy, afraid, sad, or angry social situations. An analysis of variance design was used to evaluate the relative effects of six variables: sex, status, nationality, age, emotion and test part. Five of the six variables: sex, status, nationality, age and emotion contributed significantly to the variance ($p < .01$). There were no significant differences between the two test parts. The first order interactions significant at the .01 level were status and emotion; nationality and emotion; nationality and age; and emotion and age. The significant second order interactions were status, nationality and emotion; and status, nationality and age (see Table 1).

American and Chinese children demonstrated similar overall trends in their ability to identify happy, afraid, sad, and angry situations (see Table 2). Recognition of these four types of emotional situations generally increased with age (see Figure 1). Perceptions of happy situations showed only a small increment since by 3 to 3.5 years of age over 90% of the American and Chinese middle and lower class children perceived the happy situations correctly (see Tables 3 and 4).

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Identification of fearful situations showed the greatest improvement with age. Recognition of fearful situations increased from an average of 50% correct responses between 3 and 3.5 years of age to over 90% correct responses by age 5 (see Figure 1). There was considerable variation in the younger children's ability to recognize fearful situations. Seventy percent of the Chinese middle class

children correctly identified the afraid situations as early as 3 to 3.5 years of age, as compared with only 40% of the American middle class children in this youngest age group. The American middle and lower class children caught up with the Chinest middle class youngsters by age 4 to 4.5 but the Chinese lower class children remained behind in their ability to recognize fearful situations until 5.5 to 6 years of age (see Tables 3 and 4).

The children's recognition of sad situations appeared to increase only slightly with age (see Figure 1). The apparent lack of improvement in the children's accuracy of perception of sad situations stemmed from cultural and social class differences which cancelled each other out when the data from the American and Chinese children were combined. In the youngest age group, 3 to 3.5 years, middle class and lower class Chinese children correctly identified 67% and 76%, respectively, of the sad situations as compared with American middle class and lower class youngsters of the same age who recognized the sad situations only slightly more than 50% of the time. At the older age levels American middle class children showed a dramatic improvement in their ability to identify sad situations reaching 88% accuracy by 6 years. The Chinese children, in contrast showed a slight decrease with age in the accuracy of their perception of sad situations (see Tables 3 and 4).

Chinese and American children consistently perceived angry responses less accurately than any of the other emotions (see Figure 1). There was, however, a significant increase with age in the children's ability to identify angry situations. The Chinese

lower class children had more difficulty recognizing the angry situations than the children in any of the other groups (see Tables 3 and 4).

In both cultures girls were more accurate than boys in their ability to perceive social situations (means: girls 1.44, boys 1.39). There were no significant interactions between sex and any of the other variables (i.e., nationality, status, age or emotion). Separate analyses of the four emotions--happy, afraid, sad and angry--also showed no significant differences between girls and boys.

Discussion

A comparison of very young American and Chinese children revealed basic similarities between the two groups in the early development of empathic awareness. Chinese and American children by 3 to 3.5 years of age were able to differentiate easily between social situations which evoke happy and unhappy responses in other people. These results are consistent with the findings reported in a previous study (Borke, 1971) and provide further evidence that the capacity for social sensitivity and empathic awareness develops at a very early age.

Recognition of afraid, sad and angry emotions appeared to be influenced to a considerable extent by the interaction of social class and cultural factors. Chinese middle class youngsters between 3 and 3.5 years of age were far more accurate in identifying fearful situations than Chinese lower class children or American middle or lower class children in the same age range. This increased awareness

of fearful situations by very young Chinese middle class children may reflect the overprotective tendencies of Chinese middle class parents who frequently set limits on their youngsters' active exploratory behavior because they are afraid the children will hurt themselves. American middle class children between 3 and 3.5 years of age experienced the greatest difficulty recognizing fearful situations. This would be consistent with the attitudes of American middle class parents who encourage active play and self-reliance in their young children and tend to minimize the possibility of danger or getting hurt. The rapid increase with age in the ability of American middle class children to recognize fearful situations supports the results of a previous study (Borke, 1971). In this earlier paper, it was suggested that as middle class American children grow older, they learn about situations which evoke fear responses through exposure to books and television as well as their own experiences. Interestingly enough the Chinese lower class children, for whom books and television are least accessible, lagged behind the other youngsters in their recognition of fearful situations.

The ability of Chinese middle and lower class youngsters between 3 and 4 years of age to recognize sad situations more accurately than American middle or lower class children of the same age possibly reflects the emphasis within the Chinese culture on feeling "shameful" or "losing face." The American middle class children showed a considerable increase with age in their ability to recognize sad situations. This trend was also observed in previous studies (Borke, 1971; Borke & Su, 1972) and may be related to the greater social acceptability of feeling sad between 4 and 7 years of age when American

children, more so than the children in any of the other three groups, are actively engaged in the task of developing inner controls over their unacceptable feelings.

American and Chinese children at all age levels had the greatest difficulty identifying angry situations. Since young children certainly experience anger, these results suggest that in both the American and Chinese societies children become aware of the unacceptability of expressing angry feelings at a very early age. The greater inability of lower class Chinese children to perceive angry responses in others as compared with middle class Chinese children and middle and lower class American children, may be related to the extreme subservience expected of lower class individuals in the Chinese society. The socialization of lower class Chinese children to accept this role apparently begins quite early.

An analysis of the children's incorrect responses to the sad and angry situations indicated that the majority of American and Chinese youngsters gave "angry" as their alternate response to sad situations and "sad" as their alternate response to angry situations. Only 10% of all incorrect responses to the sad and angry situations fell in other categories. The children's inability to differentiate sharply between sad and angry situations also occurred in a previous study (Borke, 1971). At the time three possible explanations were suggested: 1) ambiguity in the stories selected, 2) stronger conflict associated with feeling sad and, especially, angry in our society as compared with feeling happy or afraid, 3) individual differences in responding to frustration with some people having a

greater tendency to react with anger and others to react by feeling sad.

Although in the present study every effort was made to select situations which the majority of the children in both cultural groups would perceive as predominantly sad or angry, there was still considerable overlap in the perception of these two emotions. The cumulative evidence from this and previous investigations (Borke, 1971; Borke & Su, 1972) suggests that any situation which has the potential for either a sad or angry response generally has the potential for both (i.e., an individual might initially feel sad because someone close was leaving but later experience anger over the frustration caused by the separation). The greater difficulty experienced by the children from both cultural backgrounds in identifying angry situations as compared to happy, afraid and sad situations, supports the possibility that stronger conflict is associated with feeling angry in both the American and Chinese societies. There was also evidence that some individuals respond to frustration primarily by feeling angry and others by feeling sad. Twenty-four percent of the American and Chinese children gave "sad" as their primary response to all of the sad and angry stories and 7% gave "angry" as their primary response. This indicates that almost one-third of the youngsters had a previously established set which influenced their perception of sad and angry situations. The multiplicity of factors operating in the perception of sad and angry responses suggests that the ability to differentiate between sad and angry reactions in other people is a considerably more complex process than the identification of happy or fear responses.

The relationship of empathic ability to sex differences has been considered in a number of studies. The results are contradictory with some researchers reporting differences (Dimitrovsky, 1964; Gollin, 1958) and others finding none (Borke, 1971; Feshback & Roe, 1968; Rothenberg, 1970; Walton, 1936). In the present study sex differences appeared as a significant variable but contributed the least to the overall variance. One possible conclusion is that any significant relationship which might exist between empathic ability and sex is very small and can easily be affected by slight variations in the populations from which the samples are drawn.

This cross-cultural research supports the results of previous studies that very young children are capable of empathic awareness. The ability to differentiate between happy and unhappy responses in other people appears to be well established in both Chinese and American youngsters by 3 years of age. Some of the social class and cultural differences in the children's perceptions of fearful, sad and angry reactions seems to indicate that social learning is an important factor in the ability to recognize other people's feelings. The presence of empathic awareness in young children from very different cultural backgrounds suggests that empathy may well be a basic human characteristic related to social adaptation.

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Footnotes

[1]The author would like to thank Hwang Chien-hou, Chairman of the Psychology Department, National Taiwan Normal University, and Sarah Su, Professor of Child Development, National Taiwan Normal University, for their help in collecting the data for this study and for the valuable insights they provided on the early socialization of Chinese children. This investigation was supported by United States Public Health Service Grant MH 17778-01.

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TABLE I

Analysis of Variance Comparing Effects of Sex, Socioeconomic Status, Nationality, Test Part, Emotion, and Age on the Ability to Perceive Other People's Feelings in Social Situations

Source	df	MS	F
Sex (A)	1	3.84	9.86*
Status (B)	1	13.24	34.02*
Nationality (C)	1	5.49	14.10*
Test Part (D)	1	.76	1.94
Emotion (E)	3	177.65	456.43*
Age (F)	5	15.91	40.87*
AxB	1	.16	.41
AxC	1	.05	.13
AxD	1	.01	.01
AxE	3	.27	.71
AxF	5	.38	.97
BxC	1	1.42	3.66
BxD	1	1.64	4.22
BxE	3	1.97	5.06*
BxF	5	1.11	2.86
CxD	1	.14	.35
CxE	3	1.65	4.23*
CxF	5	2.06	5.30*
DxE	3	1.23	3.16
DxF	5	.08	.21
ExF	15	3.82	9.81*
AxFxC[1]	1	1.42	3.66
BxCxE	3	8.25	21.19*
BxCxF	5	1.20	3.07*
Residual	4533	.39	
TOTAL	4607		

*$p < .01$

[1]Only those three-way interactions were included with mean squares substantially above those for the higher order interactions. The remaining were pooled into the residual term.

TABLE 2

Percent Correct Responses by American and Chinese Children to Social Interaction Situations

Nationality	Social Class	Interaction Situations			
		Happy	Afraid	Sad	Angry
American	Middle	96	73	79	51
	Lower	97	75	58	54
	Average	96	74	69	53
Chinese	Middle	96	80	66	51
	Lower	93	68	70	36
	Average	95	74	68	44

TABLE 3

Percent Correct Responses by Middle and Lower Class American Children at Various Age Levels to Social Interaction Situations

Age	Social Interaction Situations							
	Happy		Afraid		Sad		Angry	
	Middle Class	Lower Class	Middle Class	Lower Class	Middle Class	Lower Class	Middle Class	Lower Class
3-3.5	93	97	40	52	57	52	32	47
3.5-4	91	96	48	63	78	52	40	48
4-4.5	97	97	71	74	77	52	57	52
4.5-5	97	97	84	78	84	53	65	62
5-5.5	98	98	96	93	88	74	60	54
5.5-6	99	95	97	91	88	63	53	59

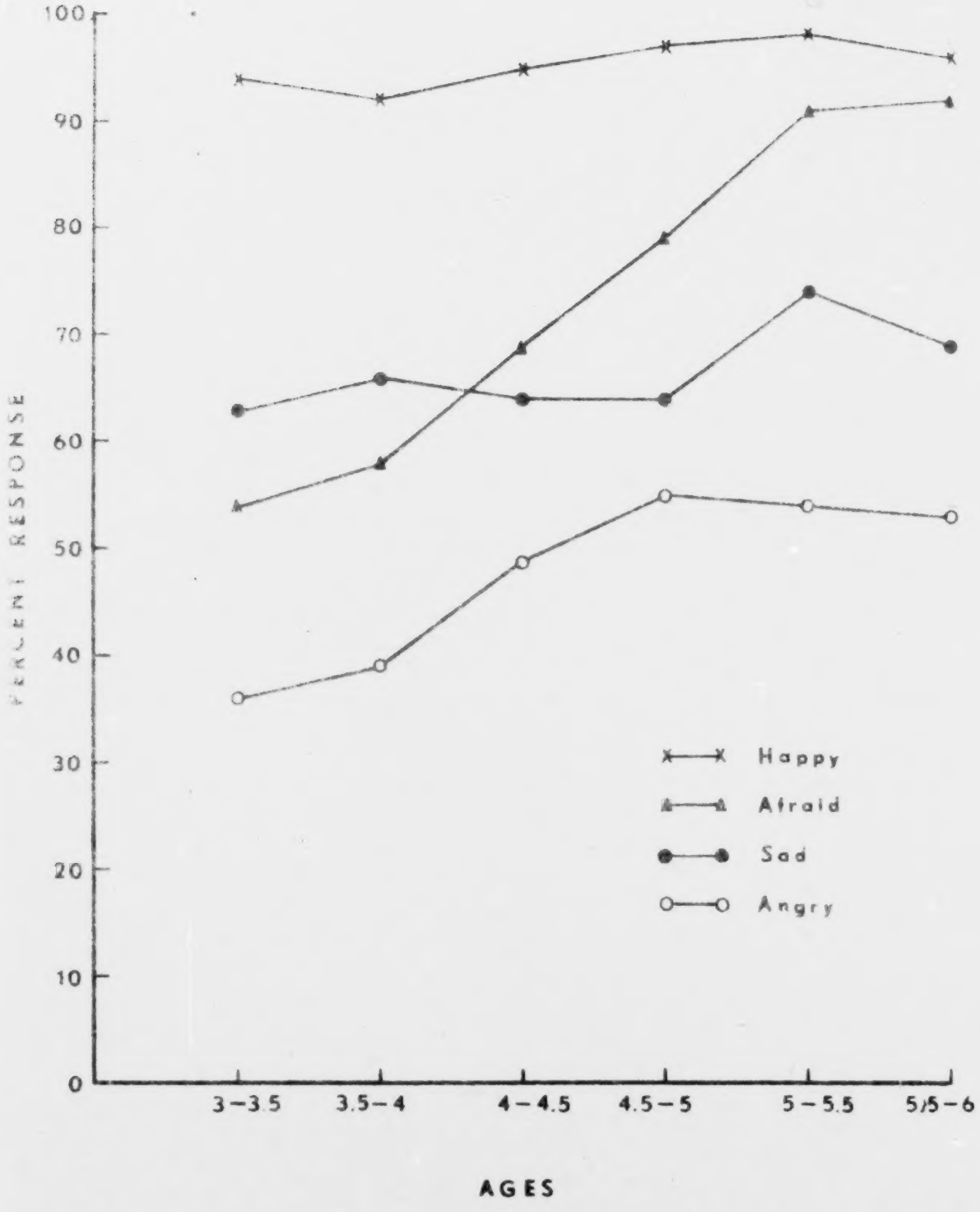
TABLE 4

Percent Correct Responses by Middle and Lower Class
Chinese Children at Various Age Levels
to Social Interaction Situations

Age	Social Interaction Situations							
	Happy		Afraid		Sad		Angry	
	Middle Class	Lower Class	Middle Class	Lower Class	Middle Class	Lower Class	Middle Class	Lower Class
3-3.5	96	91	70	54	67	76	38	27
3.5-4	93	90	68	52	76	84	40	28
4-4.5	94	91	75	52	69	55	51	38
4.5-5	98	96	83	71	61	62	58	38
5-5.5	96	99	94	82	53	79	62	42
5.5-6	96	94	87	94	67	59	57	44

FIGURE CAPTIONS

Figure 1. Percent correct responses of American and Chinese children at various age levels to social interaction situations.


100
90
80
70
60
50
40
30
20
10
0
PERCENT RESPONSE
3–3.5
3.5–4
4–4.5
4.5–5
5–5.5
5/5–6
AGES
Happy
Afraid
Sad
Angry